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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,415	10/22/2003	Richard D. Dettinger	ROC920030261US1	6177

46797 7590 10/19/2006

IBM CORPORATION, INTELLECTUAL PROPERTY LAW  
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EXAMINER

EBIRIM, EMEKA

ART UNIT PAPER NUMBER

2166

DATE MAILED: 10/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/691,415

Applicant(s)

DETINGER ET AL.

Examiner

Emeka Ebirim

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Status***

1. This communication is responsive to the Amendments filed on June 30, 2006. The application has been fully examined and claims 1-25 are rejected and are pending in this Office Action.

### ***Terminal Disclaimer***

The terminal disclaimer filed on June 30, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on application number 10/691308 has been reviewed and is accepted. The terminal disclaimer has been recorded.

### ***Response to Arguments***

#### ***Double Patenting Rejection***

2. Applicants' submission of terminal disclaimer over comes the double patenting rejection as applied. As such the examiner has withdrawn the objection.

#### ***Claim Rejections - 35 USC § 112***

3. Applicant's amendments with respect to claims the 112 rejections of the present application have been fully considered. However amendment failed to correct the 112 rejection applied in the first Office Action because the recited "data repository" still has no antecedent basis.

*Claim Rejections - 35 USC § 101*

4. Applicant's amendments with respect to claims the 101 rejections of the present application have been fully considered and it overcomes the rejections as applied under *35 USC § 101*. The rejections have been withdrawn.

*Claim Rejections - 35 USC § 102*

5. Applicant's arguments with respect to claims 1-3 and 18-25 of the present application have been fully considered but are not persuasive. The examiner respectfully traverses applicant's arguments.

With respect to the independent claims 1, Applicants argue that Wical does not disclose, "the use of pointers as set forth in claim 1".

Examiner notes that applicants' specification paragraph 0069, equates pointer to link which includes among others URL, directory path, address or any other type of object that points to or identifies a set of terms.

In response to the above argument, the Examiner respectfully submits that Wical discloses the claimed limitation as "The knowledge base 155 contains classification categories or topics, such as the knowledge catalog 150, augmented with additional terminology including cross references and links among terminology/categories. FIG. 4 illustrates an example portion of a knowledge base augmented to include additional terminology as well as cross references and links among categories and terms [Col 11 lines 40-45]. ...The knowledge base is used to expand the query terms to identify an expanded set of query terms as shown in block 405 of FIG. 5. In general, the query

terms are mapped to categories in the knowledge base. The directed graph of the knowledge base is then used to identify relevant categories/terms to expand the query term set to include related categories/terms [Col 14 lines 4-10]". The links or references (pointers) used in this disclosure enable the system to access the expansion terms or sets of expansion terms that are stored therein.

Applicant further argues that Wical does not disclose, "modifying the query to contain one or more conditions based on one or more expanded search terms".

In response to this argument, the Examiner respectfully submits that Wical discloses the claimed limitation as "The query terms are then expanded through use of the knowledge base" [Fig 7, Col 17 lines 62-65, Col 18 lines 1-16]. The initial query terms entered by the user are further modified to include other relevant terms that would enable a more effective search of the system. The expansion of the query terms certainly amounts to the modification of the query as claimed by the applicant.

With respect to the independent claims 18 and 23, Applicants argue that "Getchius fails to teach the claimed use of pointers".

In response to the above argument, the Examiner respectfully submits that Getchius discloses the claimed use of pointer as "pointers may point to the location of a term list" [Col 34 line7]. While bearing in mind the applicants' several alternative descriptions of pointer such as URL, directory path, address or any other type of object that points to or identifies a set of terms. The Examiner also submits that the cited passage in the office action, [Col 32 lines 5-13] discloses a "reference", which is equivalent to a pointer.

For the above reasons, Examiner believed that rejection of the last Office action was proper. From the foregoing applicants have not met the requirements needed to traverse the rejections made to this application under 35 U.S.C. 102 (b). And as such rejections as applied to the last Office action are hereby sustained.

*Claim Rejections - 35 USC § 103*

6. Applicant's arguments with respect to claims 4-14 and 18-25 of the present application have been fully considered but are not persuasive. The examiner respectfully traverses applicant's arguments.

With respect to the claims 4 and 5, Applicants argue that the combination of Wical and Getchius "fails to teach modification of a query and the use pointers to identify a set of expanded search terms"

In response to the above argument, the Examiner notes that applicants' appear to be arguing a non recited element in claim 4 and 5.

With respect to the independent claims 15, Applicants argue that "Getchius does not teach the claimed use of pointers to retrieve expanded search terms and corresponding modification of a saved query".

In response to the above argument, the Examiner respectfully submits that Getchius discloses the claimed element as "the query engine 862 may operate the information retrieval software 908 to take the parsed user request and expand the query, turning the user request into a detailed query... expanded to include synonyms and terms that are determined to be related to the words [Getchius Col 33 lines 54-61]...

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pointers may point to the location of a term list 836 for each such term" [Getchius Col 34 lines 5-10]. The initial query terms entered by the user are further modified into a detailed query by expansion to include other relevant terms that would enable a more effective search of the system and pointers are used in this process.

For the above reasons, Examiner believed that rejection of the last Office action was proper. From the foregoing applicants have not met the requirements needed to traverse the rejections made to this application under 35 U.S.C. 103. Hence rejections as applied to the last Office action are sustained.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites the limitation "the data repository" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Patent No: 5,940,821 to Wical (hereinafter Wical).

Claim 1.

Wical discloses:

A method of searching fields of a data repository using dynamic term expansion, comprising [Search, repository, expand query terms, dynamically, See Wical Col 3 lines 28-33, Col 14 lines 4-14, Col 30 lines 57-67, Fig 6]:

obtaining a query containing at least one condition for searching at least one field of the data repository, wherein the at least one condition includes at least one base search term [receive, user query, See Wical Col 7 lines 62-67, Col 8 lines 40-45];

identifying a set of expanded terms associated with the base search term [See Wical Col 10 lines 62-67, Fig 3];

generating a pointer to the identified set of expanded search terms [links (pointer) are generated, links among terminology/categories and terms, See Wical Col 11 lines 41-45, Col 11 lines 62-67, Col 12 lines 34-35] ; and

storing the query and information related to the pointer [stores, See Wical, abstract]; and

prior to executing the query, retrieving the query and the information related to the pointer and modifying the query to contain one or more conditions based on one or more expanded search terms retrieved using the pointer [(with this information



additional areas of search are identified), See Wical, Col 3 lines 11-18].

Claim 2.

Wical discloses the elements of claim 1 as above and furthermore it discloses modifying the identified set of expanded search terms after generating the pointer [augment, links, terms/terminology, See Wical Col 3 lines 11-18, Col 12 lines 34-35, Col 11 lines 41-45, 62-67].

Claim 3.

Wical discloses the elements of claim 1 as above and furthermore it discloses recreating the pointer based on the information related to the pointer [See Wical Col 6 lines 53-58].

11. Claims 18-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Patent No: 6,493,721 to Getchius (hereinafter Getchius).

Claim 18.

Getchius discloses:

A computer-readable storage medium containing a program for searching fields of a data repository using dynamic term expansion which, when executed, performs operations comprising [retrieval, expanded term list, Getchius Col 33 lines 55-62]:

providing a first interface allowing a user to build and save a query containing at least one condition for searching at least one field of the data repository, wherein the at least one condition includes at least one base search term [query interface, See Getchius Col 64 lines 15-20, Fig 3,43,44];

providing a second interface allowing the user to specify a set of expanded search terms to be associated with the at least one base search term and further allowing the user to specify whether the set of expanded search terms should be dynamically linked with the query via a pointer used to identify a source of the set of expanded search terms [query interface, See Getchius Col 64 lines 15-20, Fig 3,43,44, 9-15]; and

providing a runtime component configured to retrieve a saved query and modify the saved query to contain one or more conditions including a specified set of expanded search terms retrieved using the pointer [query results (expanded terms), reference (pointer), saved for later processing, Getchius Col 32 lines 5-13, Col 34 lines 5-14, Col 33 lines 54-61].

Claim 19.

Getchius discloses the elements of claim 18 as above and furthermore it discloses the set of expanded search terms should be dynamically linked with the query, saving the query comprises saving the query with information associated with the pointer [Getchius Col 33 lines 57-58].

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Claim 20.

Getchius discloses the elements of claim 19 as above and furthermore it discloses wherein the runtime component is further configured to recreate the pointer based on the information associated with the pointer [pointer may point to the location of a term list; updated term list, See Getchius Col 43 lines 6-10, Col 58 lines 49-53].

Claim 21.

Getchius discloses the elements of claim 18 as above and furthermore it discloses wherein the operations further comprise modifying the set of expanded search terms subsequent to saving the query and prior to obtaining the set of expanded terms using the pointer [updating term list (modifying), See Getchius Col 58 lines 49-53].

Claim 22.

Getchius discloses the elements of claim 21 as above and furthermore it discloses wherein the information associated with the pointer comprises a uniform resource locator (URL) [URL, Col 9 line 4].

Claim 23.

Getchius discloses:

A data processing system, comprising [See Getchius abstract]:

repository [ repository See Getchius Col 6 lines 48-50];

at least one expanded term repository [expanded term list, term list data store,  
See Getchius Col 33 lines 55-56, Fig 4, Col 13 line 65]; and

an executable component configured to retrieve a saved query containing at  
least one condition for searching at least one field of the data repository, wherein the at  
least one condition includes at least one base search term, and prior to executing the  
query, modify the query to contain one or more conditions based on one or more  
expanded search terms retrieved using pointer information associated with the saved  
query [information retrieval software, pointers See Getchius Col 33 lines 55-65, Col 34  
lines 5-14].

Claim 24.

Getchius discloses the elements of claim 23 as above and furthermore it  
discloses wherein the executable component is further configured to store the  
associated pointer information with the saved query [query, pointers, See Getchius Col  
34 lines 1-14].

Claim 25.

Getchius discloses the elements of claim 23 as above and furthermore it  
discloses:

obtain one or more parameters indicative of a state of an environment in which  
the query is to be executed [values of various environment, execution See Getchius Col  
22 lines 22-23]; and

identify a set of expanded terms associated with the base search term based, at least in part, on the one or more parameters [See Getchius Col 33 lines 55-61].

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 4-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wical in view of Getchius.

**Claim 4.**

Wical discloses the elements of claim 1 as above and furthermore it discloses obtaining one or more parameters indicative of a state of an environment in which the query is to be executed [See Wical Col 13 lines 50-57]; and identifying a set of expanded terms associated with the base search term based, at least in part, on the one or more parameters [expand query terms to identify an expanded set of query terms, See Wical Col 14 lines 4-15].

Wical discloses the elements as above but does not explicitly indicate "environment". Getchius discloses the claimed "environment" (applicant specification discloses "workload of a system" as an example of "environment" see specification paragraph 0056) [system load, See Getchius Col 5 lines 22-23].

It would have been obvious to one of ordinary skill in the art to combine the cited references because "environment" (system load) as disclosed by Getchius would have enabled Wical to overcome the drawback of time and resources spent when updating only a small portion of a database [See Getchius Col 1 lines 50-59].

Furthermore Getchius disclosure would help overcome the complexities that may arise when performing updates in a distributed computing environment that may require synchronization of transactions over multiple nodes in a computer system [See Getchius Col 1 lines 60-64].

Claim 5.

Wical discloses:

A method of searching fields of a data repository using state-sensitive term expansion, comprising:

receiving, from a user, a query containing at least one condition for searching at least one field of the data repository, wherein the at least one condition includes at least one base search term [receive, user query, See Wical Col 7 lines 62-67, Col 8 lines 40-45];

obtaining, based on the one or more parameters and the base search term, one or more expanded search terms [divides query into distinct parts; expand the query term, See Wical, Col 13 lines 50-57, Col 8 lines 44-47, Col 13 lines 6-10]; and

modifying the query to contain one or more conditions based on the one or more expanded search terms [See Wical Col 3 lines 11-22].

Wical discloses the elements as above but does not explicitly indicate "environment". Getchius discloses the claimed "environment" (applicant specification discloses "workload of a system" as an example of "environment" see specification paragraph 0056) [system load, See Getchius Col 5 lines 22-23].

It would have been obvious to one of ordinary skill in the art to combine the cited references because "environment" (system load) as disclosed by Getchius would have enabled Wical to overcome the drawback of time and resources spent when updating only a small portion of a database [See Getchius Col 1 lines 50-59].

Furthermore Getchius disclosure would help overcome the complexities that may arise when performing updates in a distributed computing environment that may require synchronization of transactions over multiple nodes in a computer system [See Getchius Col 1 lines 60-64].

#### Claim 6.

The combination of Wical and Getchius discloses the elements of claim 5 as above and furthermore Wical discloses wherein obtaining one or more expanded search terms comprises selecting a set of expanded terms from a plurality of sets of expanded terms, each set corresponding to a different level of expansion [expand query terms, levels, Wical, Fig 6,7, 9C, Col 14 lines 27-55].

#### Claim 7.

The combination of Wical and Getchius discloses the elements of claim 6 as above and furthermore Wical discloses wherein selecting a set of expanded terms from the plurality of sets of expanded terms comprises:

generating a level of expansion based on the one or more parameters [levels or tiers, See Wical Col 14 lines 27-55]; and

selecting a set of expanded search terms corresponding to the generated level of expansion [identify an expanded set of query terms, levels, See Wical Col 14 lines 4-10, 27-30].

Claim 8.

The combination of Wical and Getchius discloses the elements of claim 5 as above and furthermore Getchius discloses wherein the one or more parameters comprise at least one parameter indicative of a date or time of day [time, Col 5 line 17].

Claim 9.

The combination of Wical and Getchius discloses the elements of claim 8 as above and furthermore Getchius discloses wherein the at least one parameter indicative of a date or time of day is indicative of when the query is to be executed [query, time other than peak demand time, See Getchius Col 5 lines 17-23].

Claim 10.



The combination of Wical and Getchius discloses the elements of claim 5 as above and furthermore Getchius discloses wherein the one or more parameters comprise one or more parameters indicative of how heavily one or more system resources are loaded [during non-peak usage, Getchius Col 56 lines 55-67].

Claim 11.

The combination of Wical and Getchius discloses the elements of claim 5 as above and furthermore Getchius discloses wherein the one or more parameters comprise one or more credentials of a user issuing the query [unique identifier, Getchius Col 15 lines 9-20].

Claim 12.

The combination of Wical and Getchius discloses the elements of claim 11 as above and furthermore Getchius discloses wherein, for at least some base search terms, different sets of expanded search terms are obtained for different credentials [data, for each ID associated with a business, may be stored, Getchius Col 15 lines 25-30]

Claim 13.

The combination of Wical and Getchius discloses the elements of claim 11 as above and furthermore Getchius discloses wherein the one or more credentials comprise at least one of: an identification of the user, a group to which the user

belongs, a role of the user, and a security level of the user [data, for each ID associated with a business, unique identifier Getchius Col 15 lines 10,25-30].

Claim 14.

The combination of Wical and Getchius discloses the elements of claim 13 as above and furthermore Wical discloses

the one or more credentials comprises a role of the user [Wical Col 11 lines 24-30]; and

obtaining one or more expanded search terms comprises selecting a set of expanded search terms associated with the role of the user [user selects one or more, expanded query term, See Wical Col 11 lines 30-35, Fig 7].

14. Claims 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Getchius in view of Pat No: 6,999,959 to Lawrence et al (hereinafter Lawrence).

Claim 15.

Getchius discloses

A method for providing access to data in a data repository, comprising [data, repository, updated, See Getchius Col 2 line 6]:

providing a query building interface allowing a user to build and save a query for searching one or more fields in the data repository, the query containing at least one

condition includes at least one base search term [query interface, See Getchius Col 64 lines 15-20, Fig 3,43,44];

providing a runtime component configured to retrieve a saved query, retrieve one or more expanded terms associated with the base search term from a repository of expanded terms using pointer information associated with the saved query, and modify the query to contain one or more conditions including the one or more expanded terms [query results (expanded terms), reference (pointer), saved for later processing, Getchius Col 32 lines 5-13]; and

maintaining a repository containing the expanded terms by updating the repository of expanded terms based on co-occurrence of terms in the data repository [Repository is updated, Col 58 line 23].

Getchius discloses the elements of the claim as above but does not explicitly indicate "updating the repository of expanded terms". Lawrence discloses the claimed invention [query containing a term can add the co-occurring morphological variants to the database and subsequent queries can use these terms, and update the database, See Lawrence Col 10 lines 20-25].

It would have been obvious to one of ordinary skill in the art to have combined the cited references because "updating the repository of expanded terms" as disclosed by Lawrence would have served to enable Getchius to improve, poor precision, limited coverage, limited availability, limited user interface, and out of date databases of the major Web search engines.

Furthermore it would improve time lag between the time when new information is made available and the time that it is indexed.

Claim 16.

The combination of Getchius and Lawrence discloses the elements of claim 15 as above and furthermore Lawrence discloses updating the repository of expanded terms based on co-occurrence of terms in the data repository comprises [See Lawrence Col 10 lines 20-25]:

searching fields of the data repository for entries that contain a selected base search term [See Lawrence Col 10 lines 20-25];

tracking statistics indicative of the frequency with which other terms occur in the entries that contain the selected base search term [number or occurrences, See Lawrence Col 3 lines 10-14]; and

maintaining at least one set of expanded terms associated with the selected base search term, based on the statistics [See Lawrence Col 10 lines 20-22].

Claim 17.

The combination of Getchius and Lawrence discloses the elements of claim 1 as above and furthermore Lawrence discloses maintaining at least one set of expanded terms associated with the selected base search term, based on the statistics comprises maintaining at least a first and second set of expanded terms associated with the

selected base search term, wherein [subset of morphological variant, percentage (frequency)], See Col 10 lines 1-10]:

the first set of expanded terms comprises terms that occur, with at least a first frequency, in the entries that contain the selected base search term [subsets of morphological variant, percentage (frequency)], See Col 10 lines 1-10]; and

the second set of expanded terms comprises terms that occur, with at least a second frequency greater than the first frequency, in the entries that contain the selected base search term [subsets of morphological variant, percentage (frequency)]; variants which occur on greater than 1%, See Col 10 lines 1-15].

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emeka Ebirim whose telephone number is 571-272-3994. The examiner can normally be reached on 8:30pm - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Name: Emeka Ebirim  
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*KBP*

Name: Emeka Ebirim  
Art Unit: 2166

  
**HOSAIN ALAM**  
SUPERVISORY PATENT EXAMINER